



APPLICATION NOTE

EDF West Burton Power Station

MINISONIC CLAMP ON ULTRASONIC FLOWMETERS - FROM ULTRAFLUX

BACKGROUND:

West Burton Power Station is a 2 GW coal fired power station that's burns coal in four boilers to raise steam to generate electricity in a steam turbine.

The boilers are fed by high pressure feed pumps feeding high quality water in to the heat exchanger, that are controlled by a complex control system of boiler level measurement, pressure balances and steam demand.

The site is a vast complex system of pipes pumps control and safety valves and a large array of instrumentation.

THE PROBLEM:

The MBFP's had old unreliable flow instrumentation that gave inconsistent information on the process flow signals, that had a tendency to freeze or indicate at low or full scale. This had the risk of running the pumps with insufficient water that could cause pump failure. The pumps and pipe work ideally had to be left alone, and the available measurement points had little room for flow conditioning. The pipe size was over 500 mm diameter and the pure water was running at 139 C.

FLOWLINE'S METERING SOLUTION:

Flowline's' solution was to offer our clamp on time of flight flowmeter from ULTRAFLUX.

The MINISONIC 2000 along with the 180 C rated flow sensors offered the possibility of retrofitting a flowmeter into a hostile environment without affecting the integrity of the installed pipework/ The system was quoted, and due to the critical nature of the required information, a trial was requested followed by a long term feasibility test. Finally the system was accepted as a reliable, consistent and repeatable metering system and installed to provide indication on pump performance. Each installation had 2 systems for redundancy which were installed at 90 degrees to each other.

The systems were connected in to the main control and information system to provide feed back and alarms for flow failure.



Further Information



For Further information on the MINISONIC range of Clamp on Ultrasonic Flowmeters contact Flowline on 020 8207 6565

www.flowline.co.uk
sales@flowline.co.uk

EQUIPMENT DESCRIPTION:

EQUIPMENT SPECIFICATION:

MINISONIC 2000 pipe i. d. up to 3300 mm.
Single/Dual Channel/Chord Options.
Probe Types, Clamp On and Wetted.
Outputs, 2x 4-20mA, 2 relays for alarm, flow direction, flow threshold, Totaliser, fault, RS232 and 485, JBUS-MODBUS Protocol.
Power Supply 10-30 VDC, 9-18 VAC, Consumption < 5W Typical Accuracy +/- 1% of reading, repeatability +/- 0.05%

Now available with ESC (Echo Shape Control), and the new high technology probes for difficult applications.

These meters now have an integral keypad, display and an incredible autofocus/noise rejection capability. Full user lists and references are available.

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SPECIALISTS IN FLOW MEASUREMENT